



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Coleen H. Sullins

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

October 13, 2009

MEMORANDUM

To: Affected Local Governments in the Jordan Lake Watershed
 From: Jason Robinson, Environmental Program Consultant, NPS Planning Unit
 Subject: Guidance for local governments' design and submittal of Stage I adaptive management programs for existing development, per Session Law 2009-216

Session Law 2009-216 requires that local governments develop and submit a Stage 1 adaptive management program to the NC Environmental Management Commission (EMC) to address existing development in their jurisdiction by December 31, 2009. Session Law 2009-216 was signed by the Governor and effective June 30, 2009. This Session Law replaced the original Jordan Water Supply Nutrient Strategy: Stormwater Management for Existing Development Rule (15A NCAC 02B .0266).

The Division of Water Quality (DWQ) will have six months following submission of the local government's Stage 1 programs to review the programs and provide recommendations to the EMC for approval or disapproval. Upon approval by the EMC, local governments will have three months to begin implementing their Stage 1 programs. If the EMC requires changes to the Stage 1 programs, the local governments will be required to resubmit revised programs to the EMC within two months, and DWQ would provide recommendations to the EMC within two months of the local government's re-submittal. Each local government shall report annually to the Department on implementation of its program.

In addition to submitting a general information sheet (attached), the following measures are required in the local government's Stage 1 adaptive management programs for existing development:

1. A public education program to inform the public of the impacts of nutrient loading and measures that can be implemented to reduce nutrient loading from stormwater runoff from existing development.

2. A mapping program that includes major components of the municipal separate storm sewer system, including the location of major outfalls, as defined in 40 Code of Federal Regulations §122.26(b)(5) (July 1, 2008) and the names and location of all waters of the United States that receive discharges from those outfalls, land use types, and location of sanitary sewers.
3. A program to identify and remove illegal discharges.
4. A program to ensure maintenance of best management practices implemented by the local government.
5. A program to identify opportunities for retrofits and other projects to reduce nutrient loading from existing developed lands.

As stated in the Session Law, the Department will accept local government implementation of other stormwater program or programs in meeting the Stage 1 standards. It should be noted that the measures 1-4 are required by NPDES Phase II stormwater permits. Therefore, Phase II communities will only have to submit the general information sheet that is attached and provide their Phase II permit number, and submit a program for measure 5, the identification of retrofit opportunities and other load-reducing measures from existing development.

The attached information is guidance for developing a program for each of the five measures. Please note: The measures listed below do not have to be completed by December 31, 2009, only the program describing how they will be accomplished.

For further information, please contact Mike Randall at 919-807-6374. For information on the public education program, please contact Bridget Munger at 919-807-6363.

1. Public education program

- ❑ Provide opportunities for the public to participate in program development and implementation.
- ❑ Identify target pollutants likely to be generated from urban settings (e.g., fecal, sediment and floatables).
- ❑ Identify the appropriate target groups and develop stormwater educational material to appropriate target groups that will likely have a significant stormwater impact on the target pollutants.

Local governments may rely on state-supplied Public Education and Outreach materials, as available, when implementing its own program. Please visit www.ncstormwater.org to view a complete list of free outreach materials currently available.

- ❑ Distribute educational materials to the community, conduct public outreach activities, continue to raise public awareness on the causes and impacts of stormwater pollution, and inform the public on steps they can take to reduce or prevent stormwater pollution.

The outreach program, including those elements implemented locally or through a cooperative agreement, must include at least two of the following:

- Newspaper articles and/or inserts
- Kiosks and signage
- Targeted direct mail
- Displays at the point-of purchase
- Utility bill inserts

The outreach program, including those elements implemented locally or through a cooperative agreement, must include at least two of the following:

- Public meetings
- Community events
- Contest
- Storm drain marking
- Stream and Litter cleanups
- Group presentation and/or speeches

The outreach program, including those elements implemented locally or through a cooperative agreement, must include at least two of the following:

- News coverage
- Workshops and class room outreach
- Distributing promotional giveaways and specialty items
- Brochures, displays, signs, welcome packets, and pamphlets
- Local cable access
- Newsletters

For each media, event or activity, including those elements implemented locally or through a cooperative agreement, measure and record the extent of exposure. For example, quantity of items distributed, total attendance at outreach event or number of participants.

- ❑ Establish a stormwater hotline/helpline.
- ❑ Develop and maintain a website.

The website should include information on water quality, stormwater projects and activities, and ways to contact stormwater management program staff.

2. Mapping program

- ❑ Map major components of the municipal separate storm sewer system, including the location of major outfalls, as defined in 40 Code of Federal Regulations §122.26(b)(5) (July 1, 2008) and the names and location of all waters of the United States that receive discharges from those outfalls, land use types, and location of sanitary sewers.

Components include major outfalls and receiving streams, drainage areas, storm sewer pipes, and detention ponds and other structural BMPs.

Major municipal separate storm sewer outfall (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

3. Identify and removal of illegal discharges program

- ❑ Develop an ordinance to prohibit illicit discharges.

To meet this requirement, the local government must establish and maintain adequate legal authorities to prohibit illegal discharges and enforce the approved Illegal Discharge Detection and Elimination Program. If the local government does not have the legal authority to develop an enforceable ordinance to prohibit illicit discharges to their MS4, their program must describe how they will rely on other entities that do have the necessary authority to prohibit illicit discharges.

- ❑ Develop written procedures for implementing and enforcing the Illegal Discharge Detection and Elimination Program including appropriate enforcement procedures and actions.

Written procedures includes: 1) Right-of Entry; 2) appropriate enforcement procedures and actions; 3) description of how the local government plans to detect and address illicit discharges to the local government's system, including discharges from illegal dumping and spills; 4) description of the inspection program designed to detect dry weather flows at system outfalls; 5) description of procedures for tracing the source of an illicit discharge, including the specific techniques local government will use to detect the location of the source; 6) description of procedures for removing the source of the illicit discharge; 7) establishing and publicizing a reporting mechanism for the public to report illicit discharges; and 8) establishing an illicit discharge management tracking system.

- ❑ Conduct dry weather inspections and take reasonable steps to mitigate any illicit dumping discovered during these inspections.

Describe the steps taken for any illicit dumping discovered during these inspections including appropriate enforcement procedures.

- ❑ Provide training for employees (including contractors) on illegal discharges.
- ❑ Inform businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.
- ❑ Develop educational material and distribute to target audiences.
- ❑ Report all spills and sanitary sewer overflow's reaching storm drains or surface waters to the stormwater group.
- ❑ Establish and publicize a reporting mechanism for the public to report illegal discharges.
- ❑ Investigate and mitigate any reported illegal discharge.
- ❑ Maintain a log of hotline calls and actions taken.

4. Program to ensure maintenance of BMPs owned and operated by the local governments

- ❑ Develop and implement a mechanism to require long-term operation and maintenance of BMPs owned and operated by local government.

Describe operation and maintenance practices/procedures and schedule for structural stormwater controls owned/operated by the local governments

Provide training for staff.

5. Program to identify opportunities for retrofits and other projects to reduce nutrient loading from existing developed lands

- Establish a program to identify and prioritize places within existing developed areas that are suitable for retrofits or other nutrient load-reducing activities.
- Retrofit opportunities will be considered acceptable if all of the following conditions have been investigated:
 - The retrofit, if implemented, clearly has the potential to reduce nitrogen or phosphorus loading to the receiving water.
 - The watershed is clearly contributing nitrogen or phosphorus loading above background levels.
 - The landowner where the retrofit is proposed is willing to have the retrofit installed on their property. Securing the landowner's cooperation is one of the most important tasks for the local government, as this is often the most difficult aspect of implementing a retrofit.
 - There is adequate space and access for the retrofit.
 - It is technically practical to install a retrofit at that location.

The minimum number of retrofit opportunities that each local government is required to identify is based on a sliding scale according to the population of the community. For those communities that are not completely located within the Jordan watershed, the number of retrofits can be based on the estimated population within the watershed. The local government will have to provide the data to support this population. Table 1 below shows the minimum requirements for identifying retrofit opportunities for each affected jurisdiction. Sites may be carried over to meet the minimum requirements for up to two subsequent years provided that BMPs/retrofits have not been implemented and the site continues to meet the criteria above on an annual basis.

Table 1: Minimum Number of Existing Development Nutrient Load-Reducing Projects to be Identified on an Annual Basis Based on Local Governments' Population in the Watershed

Approximate Population in the Watershed	Minimum # of Retrofits to be Identified
Less than 15,000	1
15,000 - 30,000	2
30,000 - 60,000	3
60,000+	4

Data Collection and Notification

- Each retrofit opportunity that is identified shall be accompanied by information to describe the location of the retrofit, the type of retrofit being proposed, the property owner, as well as basic information about the watershed and the receiving water. Table 2 shows a suggested format for presenting this information for each retrofit opportunity.

Table 2: Retrofit Opportunity Table

Location description, including directions from a major highway	
Type and description of retrofit opportunity	
Current property owner	
Is the property owner willing to cooperate?	
Land area available for retrofit (sq. ft)	
Accessibility to retrofit site	
Drainage area size (acres)	
Land use in drainage area (percent of each type of land use)	
Average slope in drainage area (%)	
Environmentally sensitive areas in drainage area (steep slopes, wetlands, riparian buffers, endangered/threatened species habitat)	
Approximate annual nitrogen and phosphorus loading from drainage area (lbs/acre/year) *	
Potential nitrogen reduction (lbs/ac/yr)*	
Potential phosphorus reduction (lbs/ac/yr)*	
Estimated cost of retrofit	
Receiving water	
DWQ classification of receiving water	
Use support rating for receiving water	
Other important information	

Mapping Requirements

- Affected local governments are required to provide maps (electronic or hard copy) that show the locations of retrofit opportunities. Maps must display the following information: :
 - Drainage area to retrofit opportunity sites
 - Land uses within the drainage area
 - Locations of retrofit opportunities
 - Property boundaries in the vicinity of the retrofit opportunities
 - Significant hydrography (as depicted on U.S.G.S. topographic maps and USDA-NRCS Soil Survey maps)
 - Roads
 - Environmentally-sensitive areas (e.g., steep slopes, wetlands, riparian buffers, endangered/ threatened species habitat, where available)
 - Publicly-owned parks, recreational areas, and other open lands

**State of North Carolina
Department of Environment & Natural Resources
Division of Water Quality**

OFFICE USE ONLY	
Date Rec'd	

**JORDAN NUTRIENT STRATEGY STAGE 1
ADAPTIVE MANAGEMENT PROGRAM FOR EXISTING DEVELOPMENT -
GENERAL INFORMATION**

This form is for use by local governments in the Jordan Lake watershed that are required to implement a Stage 1 adaptive management program for their existing development according to Session Law 2009-216. A complete submittal package includes this form and three copies of the Stage 1 adaptive management program narrative. Incomplete submittals may be returned to the applicant.

I. APPLICANT STATUS INFORMATION

Name of Local Government	
County(s)	
Approximate Jurisdictional Area in Jordan Watershed (mi ²)	
Subwatershed(s) (Haw, LNH, UNH)	
Approximate Population in Jordan Watershed	

II. EXISTING LOCAL WATER QUALITY PROGRAMS

Local Water Supply Watershed Program	<input type="checkbox"/> Yes <input type="checkbox"/> No
NPDES Phase II Stormwater Program	<input type="checkbox"/> Yes <input type="checkbox"/> No
NPDES Phase II Permit #:	

III. RELIANCE ON ANOTHER ENTITY TO SATISFY ONE OR MORE OF YOUR PROGRAM OBLIGATIONS

(If more than one, attach additional sheets)

Do you intend that another entity perform one or more of your program obligations?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, identify each entity and the element they will be implementing	
• Name of Entity	
• Element they will implement	
• Contact Person	
• Contact Address	
• Contact Telephone Number	
Are legal agreements in place to establish responsibilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No

IV. CONTACT INFORMATION

Provide the following information for the person/position that will be responsible for day to day implementation and oversight of the Stage I adaptive management program.

Name of Contact Person	
Title	
Street Address	
PO Box	
City	
State	
Zip	
Telephone Number	
Fax Number	
E-Mail Address	